	Application No.	**Applicant(s)**
Notice of Allowability	09/753,336	COATES ET AL.
	Examiner	**Art Unit**	
	Dieu-Minh Le	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the communication filed 2/06/06 & interview on 03/09/07.*

2. ☒ The allowed claim(s) is/are *1,3-4,6-8,10,12-14,16-17,19-21 [now as 1-15].*

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
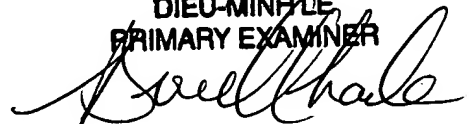**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08),
  Paper No./Mail Date <u>See Continuation Sheet</u>

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),
  Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DIEU-MINH LE
PRIMARY EXAMINER

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 12/26/2006; 12/27/2006; 11/20/2006; 2/6/2006; 6/13/2006; and 4/3/2006.

1.   This office action is in response to the communication

filed on 02/06/2006 and Interview on 03/09/2007.

2.   Claims 1, 3-4, 6-8, 10, 12-14, 16-17, 19-21 [now as 1-15]

are allowable over the prior art of record [claims 2, 5, 9, 11,

15 and 18 have been canceled].

3.   An Examiner's Amendment to the record appears below.

Should the changes and/or additions be unacceptable to

applicant, an amendment may be filed as provided by 37 C.F.R.

§ 1.312.   To ensure consideration of such an amendment, it **MUST**

be submitted no later than the payment of the Issue Fee.

EXAMINER'S AMENDMENT:

IN THE CLAIMS:

    Please replace all prior versions of claims in the application

    with the current listing claims in the **ATTACHMENT:**

4.   Authorization for this Examiner's Amendment was given in a

telephone interview with Ms. Caroline M. Fleming, Registration

No. 45,566 on 03/09/2007.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (571) 272-3660. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The Tech Center 2100 phone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DIEU-MINH THAI LE
PRIMARY EXAMINER
ART UNIT 2114

DML.
03/15/2007

ATTACHMENT:

LISTING OF CLAIMS:

1.   (Currently Amended) A system comprising:

>   a remote storage center for storing a plurality of files in a local file system;

>   a local computer for utilizing at least one file stored at said remote storage center;

>   a first local device, coupled to said local computer and to said remote storage center, for operating as an active storage port, said active storage port for receiving file system operation requests on said file from said local computer, and for translating the file system operation requests to local file system requests including a file identifier associated with contents of the file to uniquely identify the file stored at the remote storage center, said local computer and said first local device being coupled through a communications mechanisms, said active storage port further comprises a network interface, to couple said active storage port to said passive storage port, and processes to monitor the health of said active storage port and to enter said failover condition if said health falls below a pre-determined threshold; and

>   a second local device, coupled to said local computer and to said storage center, for operating as a passive storage port, said passive storage port for switching to said active storage port during a failover condition, said local computer and said second local device being coupled through said communications mechanism utilized by said first local device, said passive storage port further comprises a network interface, to couple said passive storage port to said active storage port, and processes to query said active storage port to obtain a status of said health of said active storage port; and

>   additional local devices to support a 2N failover configuration of storage ports, wherein "N" represents any integer value.

2.   Canceled.

3.   (Previously Presented) The system as set forth in claim 1, wherein said communications
        mechanism comprises:

                a network;

                said first local device comprises a network interface that communicates on said
        network using a network address; and

                said second local device comprises a network interface that communicates on said
        network after a the failover condition using said network address of said first local
        device.

4.   (Previously Presented) The system as set forth in claim 1, wherein said communications
        mechanism further comprises a network file system, such that said local computer
        exports said local file system using said network address to conduct said file system
        operations.

5.   Canceled.

6.   (Previously Presented) The system as set forth in claim 1, wherein said active storage
        port comprises a data cache, for storing said file, and a directory cache for storing file
        system information on said file.

7.   (Previously Presented) The system as set forth in claim 6, wherein said first local device
        and said second local device further comprise network interfaces for communicating to
        said storage center.

8.   (Currently Amended) An apparatus comprising:

                first local device for operating as an active storage port for a remote storage center
        that stores at least one file in a local file system, said active storage port for receiving file
        system operation requests for said file, for generating information for said file system
        operation, and for translating the file system operation requests to local file system
        requests including a file identifier associated with contents of the file to uniquely identify

the file stored at the remote storage center, said first local device being accessed through a communications mechanism, said first local device further comprises a network interface, to couple said first local device to said second local device, and processes to monitor health of said first local device and to enter said failover condition if said health falls below a pre-determined threshold; and

second local device for operating as a passive storage port, said passive storage port for switching to said active storage port during a failover condition to said active storage port, said second local device being accessed through said communications mechanism utilized by said first local device, said second local device further comprises a network interface, to couple said second local device to said first local device, and processes to query said first local device to obtain a status of said health of said first local device; and

additional local devices to support a 2N failover configuration of storage ports, wherein "N" represents any integer value.

9.   Canceled.

10.   (Original) The apparatus as set forth in claim 8, wherein said communications mechanism comprises:

a network;

said first local device comprises a network interface that communicates on said network using a network address; and

said second local device comprises a network interface that communicates on said network after a failover condition using said network address of said first local device.

11.   Canceled.

12.   (Original) The apparatus as set forth in claim 8, wherein said first local device and said second local device comprise a data cache, for storing said file, and a directory cache for storing file system information on said file.

13.   (Original) The apparatus as set forth in claim 8, wherein said first local device and said
        second local device further comprise network interfaces for communicating to said
        storage center.

14.   (Currently Amended) A method for configuring a storage system for failover operation,
        said method comprising:
                storing a plurality of files in a local file system in a remote storage center;
                utilizing at least one file stored at said remote storage center in a local
        computer;
                coupling a first local device to said local computer and to said remote storage
        center;
                operating said first local device as an active storage port by receiving file system
        operating requests for said file from said local computer, by transferring information for
        said file system operations and by translating the file system operation requests to local
        file system requests including a file identifier associated with contents of the file to
        uniquely identify the file stored at the remote storage center;
                transferring information between said local computer and said first local device
        via a communication mechanism;
                coupling a second local device to said local computer and to said remote storage
        center;
                operating said a second local device as a passive storage port by switching said
        second device to an active storage port to execute a failover condition in said first local
        device; and
                transferring information between said local computer and said second local device
        via said communication mechanism; and
                coupling additional local devices to support a 2N failover configuration of storage
        ports, wherein "N" represents any integer value; and
                coupling said first local device to said second local device;
                monitoring the heath of said active storage port;

submitting a query from said passive storage port to said active storage port to

obtain a status of said health of active storage port; and

entering said failover condition if said health falls below a pre-determined

threshold.

15.   Canceled.

16.   (Previously Presented) The method as set forth in claim 14, wherein:

transferring information between said local computer and said first local device

via a communication mechanism comprises transferring information over a network

using a network address; and

transferring information between said local computer and said second local device

via a communication mechanism comprises transferring information over a said network

using said network address of said first local device.

17.   (Previously Presented) The method as set forth in claim 14, wherein:

transferring information between said local computer and said first local device

via a communication mechanism comprises transferring information over a network

using a network address;

transferring information between said local computer and said second local device

via a communication mechanism comprises transferring information over a network

using said network address of said first local device; and

exporting a network file system of said local computer over said network using

said network address.

18.   Canceled.

19.   (Previously Presented) The method as set forth in claim 14, further comprising caching,

in said active storage port, data for said file and file system information on said file.

20.   (Previously Presented) The method as set forth in claim 14, further comprising coupling
        said active storage port to said storage center to receive data for said file and file system
        information on said file.

21.   (Previously Presented) The system of claim 1, wherein the first local device and the
        second local device each further comprise:
                a network interface capable of being coupled to the remote storage center;
                a client interface capable of being coupled to the local computer; and
                a cache capable of storing information at the storage port accessed from the
        remote storage.